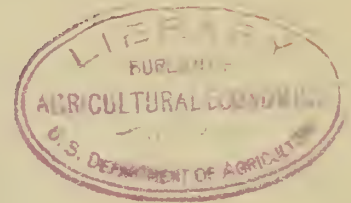


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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

MOTORTRUCK SHIPMENTS OF CITRUS FRUIT FROM THE
LOWER RIO GRANDE VALLEY OF TEXAS,
1939-40 MARKETING SEASON



By Wm. E. Paulson, Assistant Marketing Specialist

Washington, D. C.
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IMPORTANCE OF TRUCK MOVEMENT

Motortruck shipments of fruits and vegetables to market have become increasingly important, even in producing areas far distant from the large consuming markets. In the 1939-40 season, the equivalent of 6,404 carloads of grapefruit, 3,978 carloads of oranges, and 115 carloads of tangerines, or a total of 10,497 carloads (of 400 standard boxes or their equivalent) were shipped by truck from the lower Rio Grande Valley of Texas. These shipments represented slightly more than a third of the grapefruit movement and over four-fifths of the orange and tangerine movement or about 44 percent of the total citrus movement (including carlot shipments of mixed citrus) from the area (table 1).

Table 1. - Shipments of citrus fruit from the lower Rio Grande Valley, Texas, by rail, motortruck, and boat, 1939-40 season

Mode of transportation	: Grapefruit: Carloads	: Oranges Carloads	: Tangerines: Carloads	: Mixed citrus Carloads	: Total citrus Carloads	: Percent
Railroad	: 11,203	: 873	: ---	: 902	: 12,978	: 54
Motortruck	: 6,404	: 3,978	: 115	: ---	: 10,497	: 44
Boat	: 526	: 1	: ---	: ---	: 529	: 2
Total	: 18,135	: 4,852	: 115	: 902	: 24,004	: 100

Information on the distance that these truck shipments moved, and on the location and number of markets served, as well as other information relating to truck movement, is of value to growers, shippers, and others interested in citrus marketing. It is also of interest to those concerned with marketing other fruits and vegetables as an illustration of the use of the motortruck in marketing.

TRUCK-DESTINATION DATA INCOMPLETE

The data in this report on the movement of citrus fruit out of the lower Rio Grande Valley of Texas by motortruck were obtained from inspection certificates issued by the Federal-State inspection service in the State of Texas, and through the cooperation of the Bureau of Entomology and Plant Quarantine, and the Federal-State market news representatives.

Destinations were declared by truckers when applying for inspection at the time of loading in south Texas. This report includes a tabulation of these primary destinations only. In many cases diversions were made while the shipments were in transit, so that the final distribution of the truck shipments was considerably different from that shown in the report. For example, from the inspection certificates, the destination of shipments equivalent to 22,394 standard boxes or 56 carloads was given as Chicago, Ill. The reports of the Chicago market news office show 30,800 boxes or 77 carloads as truck receipts in that market from Texas for the same period. This indicates that some shipments originally reported for other points were diverted to Chicago. It is thought, however, that the destination information, although not accurate because of diversions, still gives a fairly good picture of the distribution of truck shipments of citrus fruit from this area.

The original purpose of the truck-destination tabulation was to obtain information on interstate movement. Texas destinations were therefore not recorded. Many diversions were made of truck shipments originally reported as destined to some of the large Texas markets. It is known that several of the larger truck operators gave their home operating base as the destination, and diversions were made while the trucks were in transit. The truck drivers were instructed to stop at specified towns en route to receive diversion instructions by telegraph or telephone. One large operator at Shreveport, La., advised that even though all of his loads were billed to Shreveport, a large portion was diverted to Jackson, Meridian, and Vicksburg, Miss.; and to Memphis and Nashville, Tenn. Three large operators from the State of Oklahoma declared that all of their shipments were billed to Oklahoma City, Okla., and a large number were diverted to points in Kansas, Nebraska, Iowa, and Missouri. The total tonnage of these three operators exceeded 40,000 standard boxes. A truck operator from Denver, Colo. advised that he hauled from 8 to 10 loads to Salt Lake City, Utah, but the destinations on the inspection certificates were given as Denver, Colo. Each of his loads was equivalent to approximately 250 standard boxes.

Many trucks loaded at the San Antonio, Houston, Dallas, and Fort Worth markets moved in interstate commerce, but there are no records available to show the tonnage moved from those markets. It has been reported by market officials at San Antonio, Texas, that over 200 trucks have been loaded during a single day on that market. An operator at Dallas, Texas, advised that he hauled 8 loads into the State of Idaho; 2 into Utah; 5 or 6 into Minnesota; and approximately 50 loads into Colorado, yet the destinations on all loads were given as Dallas, Texas. These loads ranged from 250 to 400 standard boxes. Two other Dallas operators stated that practically all of their loads moved to Kansas City and Joplin, Mo. These loads were all billed to Dallas. The combined tonnage of these two operators was approximately 10,000 boxes.

DISTRIBUTION OF TRUCK SHIPMENTS

Of the equivalent of 4,198,748 standard boxes (10,497 carloads) moved by truck interstate destinations were declared on only 1,819,530 boxes (4,549 carloads) or 43 percent. Truck shipments to points in Texas made up the remaining 57 percent. Interstate destinations as reported originally by the truckers included 448 cities in 31 States (table 2 and figure 1).

Table 2. - Interstate distribution of citrus by motortruck from the lower Rio Grande Valley of Texas as indicated by primary destinations reported for the season of 1939-40

State of destination	Number of cities	Number of standard boxes 1/	State of destination	Number of cities	Number of standard boxes 1/
Alabama	4	6,961	Montana	2	176
Arkansas	35	154,989	Nebraska	26	108,005
Colorado	23	202,001	New Mexico	12	12,008
Florida	1	75	New York	1	400
Georgia	1	300	North Dakota	9	8,856
Idaho	3	1,497	Ohio	14	15,946
Illinois	22	42,650	Oklahoma	67	371,398
Indiana	14	47,653	Pennsylvania	3	630
Iowa	22	62,502	South Dakota	7	7,177
Kansas	69	229,288	Tennessee	5	42,981
Kentucky	5	10,145	Utah	1	6,729
Louisiana	20	160,908	West Virginia	2	665
Maryland	1	157	Wisconsin	4	1,498
Michigan	10	27,960	Wyoming	4	9,935
Minnesota	8	4,343	Total inter-		
Mississippi	14	6,588	state truck		
Missouri	39	275,149	shipments	448	1,819,530

1/ Or their equivalent.

According to the original destination reports Oklahoma received the equivalent of 371,398 standard boxes; Missouri, 275,149; Kansas, 229,288; and Colorado, 202,001. Eleven States each received over 40,000 boxes or the equivalent of 100 carloads.

Each of fourteen cities was reported as the destination of 50 carloads or more of citrus shipments from the lower Rio Grande Valley (table 3).

Some of the most distant points given as destinations of truck shipments were: New York City; Havre, Mont.; Nampa, Idaho; Chambersburg, Pa.; and Minot, N. Dak.

PRIMARY DESTINATIONS AND QUANTITY REPORTED FOR EACH

The primary interstate destinations as reported by truckers in the lower Rio Grande Valley are shown in table 4, together with the quantity reported for each.

Distribution of truck shipments of citrus fruit from the lower Rio Grande Valley, by States of destination as originally reported by truckers, 1939-40 season

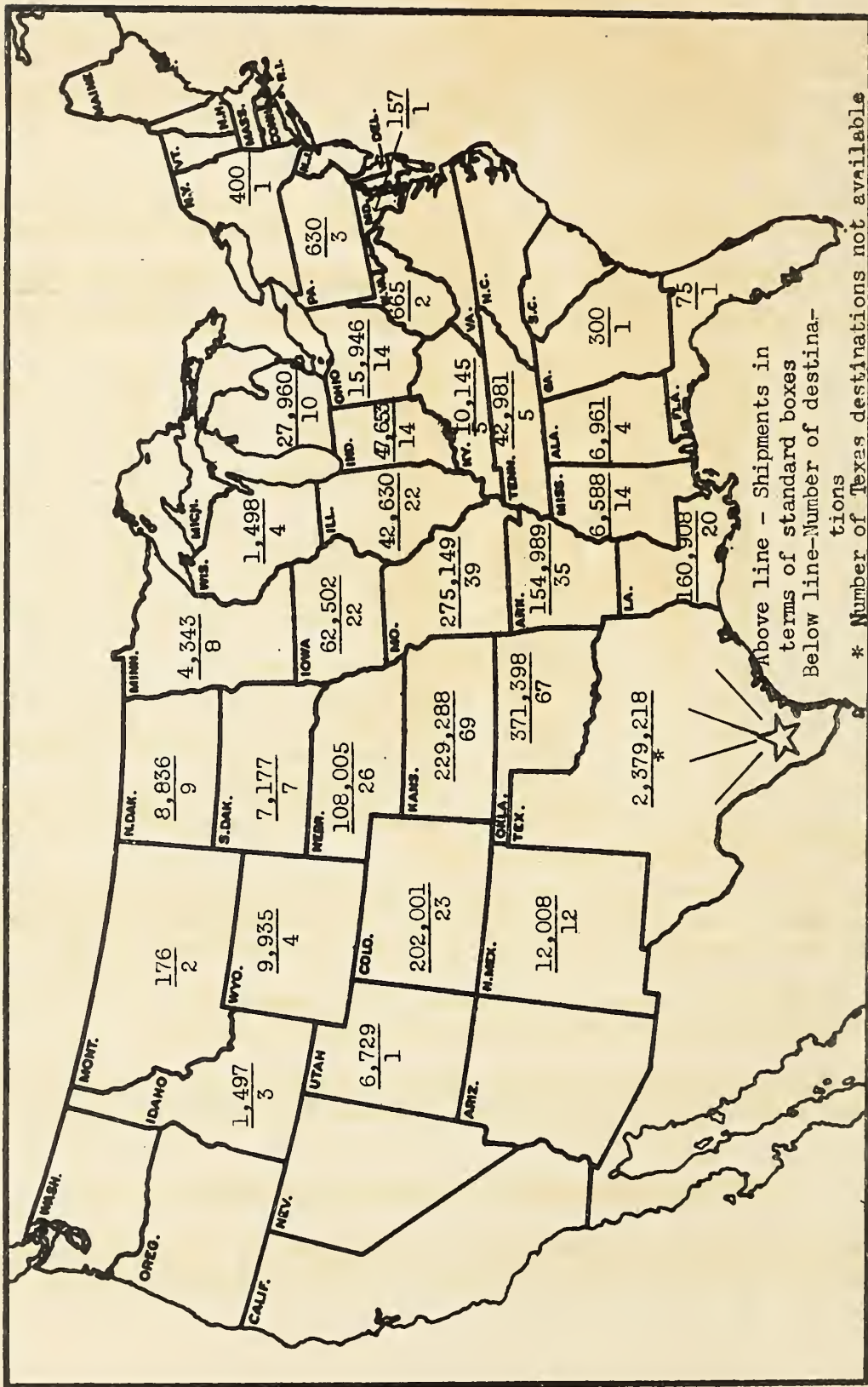


Figure 1. - Interstate truck shipments of lower Rio Grande Valley citrus fruit, equivalent to about 4,549 carloads, were originally reported as destined to 448 cities or towns in 31 States. Over three-fourths of the out-of-State truck shipments according to the original reports were destined to points in Oklahoma, Missouri, Colorado, Kansas, Louisiana, and Arkansas.

Table 3. - Cities reported as the destination of the equivalent of 50 carloads or more of interstate citrus shipments from the lower Rio Grande Valley, Texas, and quantity reported for each, 1939-40

City	Number of standard boxes : or their equivalent	Equivalent in carloads
Oklahoma City, Okla.	178,264	446
Denver, Colo.	141,130	353
Tulsa, Okla.	116,197	290
Shreveport, La.	110,193	275
Joplin, Mo.	103,794	259
Wichita, Kans.	97,999	245
Little Rock, Ark.	80,087	200
Kansas City, Mo.	71,054	$\frac{1}{1}$ 178
St. Louis, Mo.	33,941	$\frac{1}{1}$ 85
Hastings, Nebr.	32,985	82
Indianapolis, Ind.	29,588	75
Fort Smith, Ark.	24,421	62
Chicago, Ill.	22,394	$\frac{1}{1}$ 56
Sioux City, Iowa	21,391	53

$\frac{1}{1}$ The market news unload records of the Agricultural Marketing Service show truck receipts of Texas citrus fruit in equivalent carloads as follows: Kansas City, 197; St. Louis, 83; Chicago, 77. These truck unload reports are slightly incomplete.

Table 4. - Primary destinations and number of containers $\frac{1}{1}$ of citrus fruit moved by motortruck from the lower Rio Grande Valley of Texas during season of 1939-40

State and destination	Standard boxes	State and destination	Standard boxes	State and destination	Standard boxes
ALABAMA		ARKANSAS-contd.		COLORADO-contd.	
Birmingham	5,375	Leachville	87	Colorado Springs	5,383
Cottonwood	1,195	Little Rock	80,440	Craig	15
Florence	305	Lonoke	115	Delta	2,448
Mobile	86	McRae	540	Denver	141,130
Total	6,961	Malvern	300	Eaton	32
ARKANSAS		Mena	65	Englewood	120
Alma	329	Mountainburg	1,068	Fowler	10,630
Bald Knob	249	Newport	214	Ft. Collins	85
Blytheville	343	No. Little Rock	117	Ft. Morgan	400
Bradford	135	Ogden	2,503	Grand Jct.	938
Camden	159	Parkin	90	Greeley	8,171
Clarksville	155	Pine Bluff	3,214	Hasty	296
De Queen	140	Prescott	250	Holly	350
El Dorado	8	Rogers	12	Lamar	14,334
Emerson	115	Stamps	63	Longmont	50
Fayetteville	391	Springdale	2,778	Monte Vista	2,196
Foreman	59	Texarkana	17,132	Otis	2,651
Ft. Smith	24,421	Van Buren	315	Palisade	114
Helena	550	Total	154,989	Pueblo	11,018
Hope	6,332	COLORADO		Salida	518
Hot Springs	11,551	Alamosa	674	Total	202,001
Huntington	292	Canon City	32	FLORIDA	
Jonesboro	457	Cedaredge	416	Jacksonville	75

$\frac{1}{1}$ See footnote at end of table.

Continued.

Table 4. - Primary destinations and number of containers 1/ of citrus fruit moved by motortruck from the lower Rio Grande Valley of Texas during season of 1939-40-contd.

State and destination	Standard boxes	State and destination	Standard boxes	State and destination	Standard boxes
GEORGIA		IOWA-contd.		KANSAS-contd.	
Atlanta	300	Carroll	508	Hoisington	1,896
IDAHO		Cedar Falls	167	Hoyt	70
Boise	134	Cedar Rapids	2,990	Hutchinson	3,601
Idaho Falls	80	Clear Lake	248	Independence	667
Mampa	1,283	Council Bluffs	141	Inman	1,401
Total	1,497	Davenport	3,904	Iola	5,492
ILLINOIS		Des Moines	19,657	Kansas City	6,983
Bloomington	2,393	Dubuque	930	La Crosse	33
Cairo	300	Estherville	367	Larned	57
Champaign	1,554	Ft. Dodge	260	Laurel	6,555
Chicago	22,394	Iowa Falls	989	Lawrence	2,550
Decatur	165	Letts	475	Leavenworth	73
De Kalb	135	Mason City	652	Leoti	834
Dixon	325	Mt. Pleasant	587	Lucas	965
East Alton	208	Muscatine	135	Lyons	88
Fairbury	151	Newton	460	MacKsville	386
Freeport	1,257	Sioux City	21,391	Manhattan	16,035
Galesburg	704	Spencer	375	Moundridge	981
Kankakee	307	Spirit Lake	96	Mulvane	518
La Salle	695	Waterloo	2,513	Newton	495
Macomb	112	Total	62,502	Oakley	402
Murphysboro	1,160	KANSAS		Osborne	133
Ottawa	878	Abilene	813	Ottawa	545
Peoria	2,966	Anthony	1,420	Pawnee Rock	1,199
Quincy	1,785	Argonia	697	Pittsburg	1,219
Rockford	1,274	Arkansas City	2,100	Portis	2,651
Rock Island	700	Atchison	209	Pratt	1,331
Rockport	335	Bellefont	216	Rexford	395
Springfield	2,832	Belle Plaine	777	St. Francis	534
Total	42,630	Beloit	550	Salina	7,136
INDIANA		Buffalo	1,367	Sedan	187
Bloomington	300	Centerview	130	Sedgwick	962
Elkhart	727	Chanute	300	Seneca	718
Evansville	5,522	Clay Center	1,075	Stockton	100
Ft. Wayne	1,673	Coffeyville	875	Syracuse	360
Indianapolis	29,588	Colby	1,337	Topeka	17,675
Jeffersonville	32	Columbus	2,339	Ulysses	9
La Fayette	1,300	Concordia	1,213	Wamego	1,752
Logansport	350	Dodge City	7,262	Wellington	4,418
Mishawaka	276	Eldorado	383	Wichita	97,134
Muncie	1,429	Emporia	2,138	Windom	78
Peru	59	Ensign	165	Winfield	649
So. Bend	3,918	Florence	100	Total	229,288
Terre Haute	2,279	Ft. Scott	2,284	KENTUCKY	
Vincennes	200	Fredonia	9	Bowling Green	19
Total	47,653	Garden City	9,964	Henderson	865
IOWA		Goodland	237	Lexington	675
Ames	4,988	Great Bend	1,894	Louisville	6,721
Burlington	671	Hillsboro	167	Paducah	1,865
<u>1/</u> See footnote at end of table				Total	10,145

Continued.

Table 4. - Primary destinations and number of containers 1/ of citrus fruit moved by motortruck from the lower Rio Grande Valley of Texas during season of 1939-40-contd.

State and destination	Standard boxes	State and destination	Standard boxes	State and destination	Standard boxes
LOUISIANA		MISSISSIPPI-contd.		MISSOURI-contd.	
Alexandria	8,931	Columbus	87	Sikeston	150
Baton Rouge	1,857	Drew	10	Springfield	11,597
Chatham	2,149	Greenville	100	Taylor	100
Gilliam	106	Greenwood	50	Webb City	73
Independence	30	Grenada	100	Weston	250
Kilbourne	102	Harriston	267	Total	275,149
Lafayette	3,465	Hattiesburg	100	MONTANA	
Lake Charles	1,567	Jackson	3,300	Glasgow	55
Leesville	1,246	Meridian	581	Havre	121
Monroe	18,050	Natchez	531	Total	176
Newellton	90	Vicksburg	1,316	NEBRASKA	
New Iberia	478	Wesson	27	Ainsworth	1,305
New Orleans	11,431	Total	6,588	Benkelman	804
Opelousas	232	MISSOURI		Columbus	300
Port Allen	5	Berger	85	Elsmere	6
Shreveport	110,193	Bernie	200	Fairbury	2,897
Sugartown	383	Cape Girardeau	1,148	Fremont	5,120
Sunset	300	Carthage	2	Gering	1,246
Tallulah	206	Cassville	335	Grand Island	10,609
Ville Platte	87	Charleston	3,635	Hastings	32,985
Total	160,908	Columbia	1,940	Hershey	629
MARYLAND		Doniphan	1,854	Kearney	13,310
Marion	157	Durham	390	Kimball	208
MICHIGAN		East Prairie	274	Lincoln	9,697
Battle Creek	350	Forsyth	200	Loup City	285
Benton Harbor	347	Gilmore	160	McCook	466
Detroit	501	Goodman	125	Mitchell	288
Flint	1,238	Hannibal	548	Mt. Clare	3,467
Grand Rapids	19,723	Joplin	104,026	Newport	132
Holland	1,775	Kansas City	71,054	Norfolk	847
Jackson	700	Kennett	245	North Platte	1,213
Kalamazoo	1,530	Kirksville	18,726	Omaha	18,306
Lansing	746	Lancaster	530	Orleans	470
Owosso	1,050	La Plata	534	Scottsbluff	2,859
Total	27,960	Liberty	290	Shelton	165
MINNESOTA		Marshfield	997	Valentine	116
Blue Earth	137	Moberly	753	Wilcox	275
Erskine	398	Monett	500	Total	108,005
Hayward	952	Neosho	2,858	NEW MEXICO	
Mankato	400	Nevada	647	Alamogordo	90
Marshall	507	Palmyra	300	Albuquerque	4,983
Minneapolis	1,268	Poplar Bluff	1,570	Artesia	704
Red lake	81	Rogersville	379	Boaz	500
St. Paul	600	St. Joseph	13,634	Clayton	85
Total	4,343	St. Louis	33,941	Clovis	1,556
MISSISSIPPI		Sedalia	649	Hobbs	488
Clarksdale	36	Senath	100	Las Cruces	175
Cleveland	83	Seneca	350	Portales	1,015

1/ See footnote at end of table.

Continued.

Table 4. - Primary destinations and number of containers ^{1/} of citrus fruit moved by motortruck from the lower Rio Grande Valley of Texas during season of 1939-40-contd.

State and destination	Standard boxes	State and destination	Standard boxes	State and destination	Standard boxes
NEW MEXICO -contd.		OKLAHOMA-contd.		OKLAHOMA-contd.	
Roswell	1,974	Claremore	99	Tonkawa	1,284
Roy	294	Clinton	352	Tulsa	116,197
Socorro	139	Cushing	1,942	Watonga	192
Total	12,008	Deer Creek	1,156	Weleetka	179
NEW YORK		Durant	146	Wetumka	516
New York	400	Elk City	19	Woodward	85
NORTH DAKOTA		Elmer	30	Yukon	163
Bismarck	2,570	El Reno	180	Total	371,398
Devils Lake	347	Enid	14,118	PENNSYLVANIA	
Drayton	55	Fairfax	251	Chambersburg	223
Fargo	2,074	Geary	396	Erie	290
Grand Forks	623	Grandfield	82	Shippensburg	117
Hatton	147	Guthrie	166	Total	630
Jamestown	300	Guyton	757	SOUTH DAKOTA	
Mayville	1,913	Henryetta	105	Aberdeen	351
Minot	607	Hobart	2,248	Deadwood	300
Total	8,836	Holdenville	75	Delmont	12
OHIO		Hollis	316	Huron	620
Akron	17	Hugo	18	Mitchell	1,160
Bellefontaine	2,755	Keota	42	Sioux Falls	4,389
Buchtel	100	Kingfisher	103	Watertown	345
Canton	470	Lawton	8,624	Total	7,177
Cincinnati	1,088	Loyal	192	TENNESSEE	
Columbus	1,860	McAlester	219	Harriman	353
Dayton	1,016	Madill	525	Knoxville	2,615
Findlay	300	Manum	311	Memphis	21,294
Lima	1,005	Marlow	289	Nashville	18,554
Mansfield	2,195	Medford	73	Yorkville	165
Martins Ferry	239	Meeker	500	Total	42,981
Springfield	340	Miami	1,221	UTAH	
Toledo	3,863	Muskogee	5,730	Salt Lake City	6,729
Youngstown	698	Norman	1,808	WEST VIRGINIA	
Total	15,946	Okemah	1,021	Charleston	346
OKLAHOMA		Oklahoma City	178,264	Wheeling	319
Ada	1,273	Oklmulgee	7,818	Total	665
Altus	1,937	Perkins	103	WISCONSIN	
Alva	5,127	Ponca City	3,040	Appleton	325
Anadarko	213	Pocleville	114	Madison	136
Antlers	23	Putnam	30	Milwaukee	627
Ardmore	3,851	Rush Springs	604	Neenah	410
Beaver	31	Sapulpa	935	Total	1,498
Blackwell	76	Sayre	272	WYOMING	
Blair	85	Sentinel	1,735	Casper	3,652
Bristow	365	Shattuck	347	Cheyenne	5,425
Canute	32	Shawnee	2,074	Sheridan	295
Carnegie	235	Stillwater	53	Torrington	563
Chickasha	981	Tishomingo	50	Total	9,935
				Grand total	1,819,530

^{1/} Some truck shipments were in containers other than standard boxes, as 1-3/5 bushel sacks, bushel baskets, and others. These have been converted to standard boxes and included in this table.

VARIATIONS IN TRUCK SHIPMENTS BY MONTHS AND DAYS

Weather conditions did not seem to interfere with the shipments of fruits and vegetables into the northern States during the winter months. It will be noted in the table "Motortruck citrus shipments by months..." that truck shipments were heaviest during December, January, and February (table 5). Truck shipments were made to northern markets, even during periods of very low temperatures. Very few, if any, trucks making the northern hauls were equipped with any kind of heating units, and in many cases were of the open-top type. Most of the trucks carry padding that consists of old blankets, quilts, tarpaulins, and other insulation for protection of the shipments from freezing injury.

Table 5. - Motortruck citrus shipments by months, 1939-40 ^{1/}

Month	: Motor- : trucks	: : : Grapefruit:	: : : Oranges	: : : Tangerines:	: Total : citrus
	: <u>Number</u>	: <u>Carloads</u>	: <u>Carloads</u>	: <u>Carloads</u>	: <u>Carloads</u>
October	: 2,503	: 616	: 442	: 1	: 1,059
November	: 3,766	: 946	: 643	: 20	: 1,609
December	: 4,382	: 1,016	: 879	: 59	: 1,954
January	: 3,840	: 1,109	: 655	: 30	: 1,794
February	: 3,809	: 992	: 817	: 5	: 1,814
March	: 3,250	: 1,130	: 430	: ---	: 1,560
April	: 1,506	: 571	: 104	: ---	: 675
May	: 101	: 24	: 8	: ---	: 32
Total	: 23,157	: 6,404	: 3,978	: 115	: 10,497

^{1/} Information compiled by the Weslaco market news office, from figures received daily from the Quarantine Road Station, therefore it includes only truck movement from the lower Rio Grande Valley of Texas during the season of 1939-40.

In earlier days of the trucking industry, Friday, Saturday, and Sunday were considered as "off days" for the truckers because shipments originating on those days would mostly arrive on the nearby receiving markets on Saturday and Sunday when the markets were not in operation. Due to the great increase in the use of motortrucks by the produce industry, Sunday is now the most important marketing day on such markets as Dallas and San Antonio, Texas, Oklahoma City and Tulsa, Okla., Little Rock, Ark., Joplin, Mo., and Benton Harbor, Mich., all of which are principally truck markets. This being the case, there are no "off days" for the truckers. In fact, the latter part of the week is usually the most active period for truck shipments.

RETURN LOADS FOR TRUCK OPERATORS

Most of the truck operators are managing to obtain "pay loads" to and from Texas. Truckers who haul citrus fruit into Idaho transport potatoes, onions, and apples south. From Colorado, Minnesota, and North Dakota truckers carry potatoes, onions, and pinto beans; from Michigan, apples, celery, and onions. Most of these loads are disposed of in Dallas, Fort Worth, Houston, and San Antonio before the truckers enter the lower Rio Grande Valley for citrus and vegetables. A number of Iowa truckers hauled grain south and sold or traded it for citrus and vegetables. Some truckers hauled shock.

SIZE OF TRUCK LOADS

According to the records, 23,157 trucks hauled the equivalent of 4,198,748 standard boxes, which would indicate that the average load leaving the lower Rio Grande Valley of Texas was in excess of 15,000 pounds. However, this figure does not take into consideration the fact that a large number of trucks hauled mixed loads of fruits and vegetables. Every truck carrying 5 containers or more of citrus was counted as a truck unit of citrus. No consideration was given to the balance of the load of vegetables. Noting the small number of containers destined to a number of cities it can readily be seen that such loads would not be profitable unless additional merchandise also was hauled. It is believed that a conservative estimate of the average truck load out of south Texas would be in excess of 18,000 pounds. It is known that as many as 402 standard boxes of oranges or approximately 36,000 pounds have been hauled from the valley on a single unit.

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